

CRF-ChemCYS Symposium 2022, 12-14 October

Blankenberge, Belgium

Poster Sessions

Poster session A: Wednesday October 12, 15:50-17:00 (Cafeteria)

Functional Materials (FM)		
FM-A01	Aerts Andreas	Development of responsive hydrogels for innovative treatment of osteoarthritis
FM-A02	AG Karthick Raj	Self-healing photoelectrocatalyst for selective oxidation of glycerol into valuable products
FM-A03	Arreguin Campos Mariana	Tough PEO based hydrogels for 3D printing and tissue engineering
FM-A04	Bazylevska Anastasiia	Bipolar electrochemistry for functionalization of 2D materials
FM-A05	Bhandary Subhrajyoti	Effect of chemical substitution on the construction of boroxine-based supramolecular crystalline polymers featuring B←N dative bonds
FM-A06	Billiet Naomi	Chemical solution-based synthesis of earth-abundant electrocatalysts for PEM water electrolysis
FM-A07	Borbás Balázs	Upconverting nanoparticles: energy transfer with dye molecules in suspensions and thin film systems
FM-A08	Chandrasekharan Vinodchandran	NMR studies of hydrogen-bonded water-aminium assemblies templating SAPO materials
FM-A09	De Meyer Pieter	Design of advanced anode materials for lithium ion batteries
FM-A10	De Vriendt Xeno	Quantifying delocalization and static correlation errors by imposing (spin)population redistributions through constraints on atomic domains
FM-A11	Debusschere Nele	Chemical solution synthesis of copper-based photocathode materials for photoelectrochemical reduction of CO ₂ to methanol
FM-A12	Dochain Denis	Innovative sol-gel routes to mesoporous bifunctional catalysts for the upgrading of bioethanol to butadiene

FM-A13	Driesen Sander	Combining hybrid hydrogels with peptide conjugation for targeted cartilage tissue engineering
FM-A14	Dumortier Loïc	A reactive force field for alumina systems
FM-A15	Ebrahimi Mahsa	Tailored network topology in mechanically robust double network hydrogels for 3D printing and injection
FM-A16	Giordano Luca	Study on Ga incorporation into InP quantum dots for laser application
FM-A17	Grachev Vladimir	Phase separation and stability of cotton and bacterial cellulose nanocrystals in the presence of various salts
FM-A18	Gutierrez Cisneros Carolina	Improvement of the mechanical performance of methacrylated alginate wound dressings through the addition of different crosslinking agents
FM-A19	Hamid Mouna	Advanced segmented block copoly(ether ester) for more sustainable polymer 3D printing
FM-A20	Houben Sofie	Dual network hydrogels with dynamic crosslinking possessing tuneable mechanical properties
FM-A21	Kavak Safiyye	3D investigation of metal-organic frameworks at atomic scale

Chemistry meets Biology (CB)

CB-A01	Abdelhameed Shorok	Polyoxometalate ligand enables regioselective copper-mediated oxidative cleavage of protein
CB-A02	Borrego-Muñoz Paola	Anti-inflammatory effect of Izalpinin derived from <i>Chromolaena leivensis</i> : λ -carrageenan-induced pawa edema and in silico model
CB-A03	Cleirbaut Robine	Using UV-Vis spectroscopy and EPR as a tool to study the incorporation of heme proteins in titania
CB-A04	Declerck Kilian	Metal-oxo clusters as new class of nanozymes toward protein hydrolysis
CB-A05	Denijs Elias	Temperature triggered in situ tyrosine bioconjugation

CB-A06	Heirman Pepijn	The effect of plasma-induced oxidation on the interaction of inhibitory NK-cell receptors with their cancer cell ligands
CB-A07	Keskin Özlem Buse	Isolation, purification and structural characterization of siderophores from <i>P. damsela</i> subsp. <i>piscicida</i>
CB-A08	Keskin Özlem Buse	Growth and siderophore production in vitro <i>P. damsela</i> subsp. <i>Piscicida</i> under iron limitation
CB-A09	Krols Simon	Targeted AURKA degradation: towards new therapeutic agents for neuroblastoma
CB-A10	Lentink Sarah	Noncovalent complexes formed between hybrid polyoxometalates and proteins

Chemical Synthesis & Methodologies (CS&M)		
CS&M-A01	Ach Bram	Rapid aza-analoging of common carbocyclic scaffolds via a Diels-Alder/retro-Diels-Alder approach
CS&M-A02	Alizadeh Eslami Ali	A thermoreversible sol-gel route for the synthesis of ZrO ₂ , CeO ₂ , TiO ₂ , and SnO ₂ catalysts used in the valeric acid ketonization
CS&M-A03	Bafti Arijeta	Influence of the titanium pretreatment on the yield titania nanotube properties
CS&M-A04	Beliš Marek	Nucleation and particle growth of poly(3-alkylthiophenes)
CS&M-A05	Bevernaege Kevin	Au(I) catalysed benzylic C-H amination with PTAD
CS&M-A06	Cruyssaert Ben	Exploration of synthesis and surface chemistry of colloidal alkaline-earth chalcogenides
CS&M-A07	Dadashova Narmin	Study of poloxo- and peroxometalates containing rare earth elements catalysts by physicochemical methods
CS&M-A08	Das Soumya Kumar	In-situ XRS and XES following Ni-Fe restructuring during methane dry reforming
CS&M-A09	De Vos Lobke	Development of polymeric hybrid scaffolds for corneal tissue engineering
CS&M-A10	Demaerel Joachim	Synthesis of imidosulfur(IV) derivatives of sulfinate and sulfite esters via formal S-S bond insertion of dichloramines

CS&M-A11	Eloi Loïc	Synthesis and characterization of hybrid materials containing H-ZSM-5 and CeO ₂ for the one-step dehydration of 1,3-butanediol to butadiene
CS&M-A12	Górczyńska Sylwia	Chirality generation in triphenylmethane derivatives
CS&M-A13	Gries Aurelia	Determination of reaction enthalpies of synthesizing β -Li ₃ PS ₄ in tetrahydrofuran
CS&M-A14	Hašková Lenka	Preparation of nature-based sulfoxides: alliin and its derivatives
CS&M-A15	Ilić Milica	Synthesis, biological evaluation and in silico ADMET prediction of 17 α -picolyl and 17(E)-picolinylidene estra-1,3,5(10)-triene derivatives
CS&M-A16	Kalandia Givi	Polyoxometalate – pillararene hybrid for supramolecular polymer formation

Energy & Environment (E&E)		
E&E-A01	Ampe Adriaan	In-column modification of aminopropyl silica to produce highly performant stationary phases for Temperature-responsive liquid chromatography (TRLC)
E&E-A02	Beckwée Emile	Kinetics & thermodynamics of CH ₄ storage in solid aided clathrates
E&E-A03	Ciocarlan Radu-George	Modification of the surface chemistry of porous silica materials for gas storage applications
E&E-A04	De Geest Mitra	Clay-based structured composites for wastewater treatment through chromium removal
E&E-A05	Gueibe Christophe	Investigation of xenon adsorption in three types of porous materials
E&E-A06	Jia Yu-Wei	Simultaneous measurements of metals and PAHs using diffusive gradients in thin films (DGT) with an environmentally friendly binding layer
E&E-A07	Kajtazi Ardiana	ChromaRIM App: the new software in liquid chromatography to assist structural identification of small environmental solutes
E&E-A08	Kummamuru Nithin	Accelerated formation of methane hydrates in stainless steel beads packed reactor
E&E-A09	Lejaegere Charlotte	In-line gas chromatograph for ultra-trace level analysis of off-flavor compounds in water

E&E-A10	Lenaers Stijn	Large organic cations as stabilizing interlayer for hybrid perovskite solar cells
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Chemical Processes & Reactor Technologies (CP&RT)		
CP&RT-A01	Arts Wouter	Stepping away from purified solvents in reductive catalytic fractionation, a step forwards towards a disruptive wood biorefinery process
CP&RT-A02	Bekele Beruk Alemu	Understanding the kinetics of 2,3-butanediol dehydration into 1,3-butadiene via kinetic modeling
CP&RT-A03	Bonheure Mike	Power-2-olefins: supersonic olefin production
CP&RT-A04	Bossier Sander	Plasma catalytic dry reforming of methane: how material properties influence conversion and kinetics – The PlasMaCatDESIGN project
CP&RT-A05	Ceulemans Sara	Effect of quenching on the afterglow temperature to improve CO ₂ conversion in a rotating gliding arc plasma reactor
CP&RT-A06	Den Haese Milan	Fully biobased-triblock copolymers generated using an unconventional oscillatory plug flow reactor
CP&RT-A07	Devos Cedric	A microfluidic batch reactor for quiescent multiphase paracetamol crystallization
CP&RT-A08	Gao Yujie	Ultrasensitive turn-on luminescence humidity sensor based on a perovskite/zeolite composite
CP&RT-A09	Garbarino Lucas Ivan	Mesoscale reaction-diffusion modelling of lignin solvolysis

Renewables & Sustainability (R&S)		
R&S-A01	Adeel Muhammad	Reducing the toxicity of crumb rubber granulates by encapsulation with (reclaimed) polymeric coatings
R&S-A02	Bleus Dries	Activated carbon adsorbers from NADES-extracted brewer's spent grain and malt dust biomass
R&S-A03	Delabie Florian	Hemicellulose in the RCF biorefinery: towards a sustainable production of furfural in green solvents
R&S-A04	Hernandez Toribio Aitor	On the positioning of the internal catalyst in non-isocyanate polyurethanes: from faster exchange ratios to selective urea formation

R&S-A05	Jacobs Bram	Green two-step valorization of organosolv lignin: depolymerization and hydroxyalkylation
R&S-A06	Lubbe Foster	Drinking water from the air in South Africa

Poster session B: Thursday October 13, 15:10-16:20 (Cafeteria)

Functional Materials (FM)		
FM-B01	Lavendomme Roy	MoloVol: an easy-to-use tool for calculating cavity volumes and surfaces
FM-B02	Lenaerts Hilde	Designing metal oxide-based stationary phases for the separation of Ac-225 and Bi-213 for biomedical applications
FM-B03	Marcinkas Mantas	Organic semiconductors with phosphonic acid functional groups for application in photovoltaics
FM-B04	Maufort Arthur	Functionalization of 2D layered hybrid perovskites with benzotriazole-based organic ammonium salts
FM-B05	Misiakos Georgios	Structure-property investigation of Diels-Alder polymer networks
FM-B06	Misko Vyacheslav	Inverse solidification in active soft matter: towards new functional materials
FM-B07	Mohanty Sonali	Dual mode – thermometry and drug release vehicles based on hollow Y2O3:Er,Yb and Y2O2SO4:Er,Yb spheres
FM-B08	Mullaliu Angelo	Cutting-edge characterization tools for the in-depth investigation of functional materials
FM-B09	Mychinko Mikhail	The influence of size, shape, and defects on heat-induced alloying in individual Au@Ag core-shell nanoparticles
FM-B10	Naenen Viktor	Synthesis and characterization of high purity two-dimensional monolayer Ti3C2 MXenes
FM-B11	Ninakanti Rajeshreddy	Effect of tunable shell thickness on the plasmon-enhanced photocatalytic activity of (Au/Ag)@TiO2 core shell nanoparticles

FM-B12	Premcheska Simona	Effect of the synthetic route on the morphological and temperature-dependent photoluminescence properties of Na ₃ ZrF ₇ (Yb,Er) nanoparticles
FM-B13	Princen Ken	REVERSIGEL: REVERSIBly crosslinked hydroGELs for effective cardiac stem cell delivery
FM-B14	Radhakrishnan Sambhu	Hydrogen bonding with framework siloxane bonds drives liquid phase adsorption of primary alcohols in high-silica zeolites
FM-B15	Respekta Dobromiř	Band alignment in InP/ZnSe core/shell quantum dots
FM-B16	Sasikumar Rahul	Multilevel nanoscale chemical patterning of graphite at different length scales
FM-B17	Svirskaitė Lauryna Monika	N-type self-assembled semiconductors for application in photovoltaic devices
FM-B18	Tiryaki Ařkım Cansel	Optimization of sulforaphane extraction from cabbage seeds by ultrasound and microwave extraction methods
FM-B19	Van Bossele Laura	Strontium barium niobate thin layers as lead-free alternative for photonic applications
FM-B20	Van Hende Daria	The role of electron correlation on resonance effects
FM-B21	Zhu Jian	Boosted CO ₂ reduction of non-precious metal Ni@N-doped carbon electrocatalyst by regulating the synergies of Ni and N-doping

Chemistry meets Biology (CB)		
CB-B01	Balcaen Tim	Exploring contrast-enhancing staining agents for studying adipose tissue by means of contrast-enhanced computed tomography
CB-B02	Magdalenic Katarina	The natural product curcumin as a source of inspiration for the development of novel benzothiazepane-based cancer cell cytotoxic agents
CB-B03	Pappa Michaela	Chlorella sp. culture in coagulation and dissolved air flotation separation process using a poly-ε-lysine coagulant
CB-B04	Savic Nada	Controlling the reactivity of metal substituted polyoxometalates as artificial proteases through the

		interplay between surfactant and protein interactions
CB-B05	Sestic Tijana	Synthesis, structural characterization and in silico study of novel 4-azasteroid-17-hydrazone derivatives
CB-B06	Simms Charlotte	Introducing a second metal to Zr-MOF-808 to increase activity as an artificial peptidase
CB-B07	Swinnen Siene	Hydrolytic activity of Zr(IV) metal organic frameworks towards proteins in buffer solutions
CB-B08	Ul Haq Farhan	Deciphering the conformational landscape of ROS1 kinase using computational tools
CB-B09	Verdonck Jelle	Development of an analytical methodology for ultra-trace chromium speciation in biological fluids
CB-B10	Weckx Pasquinel	High temperature DOSY-NMR measurements allow for diffusion-based virtual separation in mixtures of less mobile biopolymers
CB-B11	Zhao Yuheng	Understanding the bone and vascular calcification related to type I collagen and Poly (ADP-ribose) in collagen tissues – a computational investigation

Chemical Synthesis & Methodologies (CS&M)

Chemical Synthesis & Methodologies (CS&M)		
CS&M-B01	Degroote Frederick	Exploring the synthetic utility of proton-free sulfur-mediated (3+2) cycloadditions
CS&M-B02	Kheradmand Ezat	Ligand exchange quantification on colloidal InAs quantum dots
CS&M-B03	Lederer Mirijam	The influence of bases on thermal decomposition synthesis of LaF3
CS&M-B04	Lemaître Tom	Development of targeted Tb-161 radiolabeled nanoparticles
CS&M-B05	Liu Cuilian	Polyoxometalate based metal-organic assemblies towards supramolecular catalysis
CS&M-B06	Madhav Dharmjeet	Ultrasound assisted, bio-inspired CO2 mineralization to form CaCO3 with different morphology
CS&M-B07	Maes Diederick	Make and break: new thiol-thiol bonding and debonding platforms

CS&M-B08	Moussawi Mhamad Aly	Versatile post-functionalization strategy for the formation of symmetrical and non-symmetrical organic-inorganic polyoxometalate hybrids
CS&M-B09	Osmanova Sevinj	Effect of reaction conditions on the phase composition, magnetic and catalytic properties of MnOx-Na2WO4/SiO2 oxide system for oxidative conversion of methane
CS&M-B10	Osmanova Sevinj	Reactions of free radicals in catalytic oxidative conversion of methane based on in situ EPR/MS data
CS&M-B11	Radovanović-Perić Floren	Development of nanoporous crystalline thin films by spark plasma ablation deposition
CS&M-B12	Raes Arno	Sonochemistry as alternative route for the synthesis of black titania
CS&M-B13	Salazar Marcano David	Post-functionalization of hybrid hexavanadates as components in supramolecular systems
CS&M-B14	Talukdar Kristy	Sol-gel synthesis of Cu-based niobate for photoelectrochemical conversion of CO2
CS&M-B15	Van Hoey Wouter	Effect of templating on hydrothermal synthesis of Ce/Zr-oxide based catalysts for combustion of volatile organic compounds
CS&M-B16	Vaneckhaute Ewoud	1H/D scrambling on functional groups of transition metal ligands enables conformational NMR analysis of homogeneous hydrogenation catalysts
CS&M-B17	Vermeeren Benjamin	Reductive amination of glycolaldehyde towards ethylene polyamines: selectivity control by fundamental mechanistic insight
CS&M-B18	Voets Lauren	SuFEx-enabled, chemoselective synthesis of triflates, triflamides and triflimidates

Energy & Environment (E&E)

E&E-B01	Ma Tianhui	Biogeochemical cycle of Mercury (Hg) in sediment of the Scheldt Estuary and the Belgian Part of the North Sea (BPNS)
E&E-B02	Matranxhi Besarta	Assessment of the toxic potency and mutagenicity of soils from waste dumping sites in Wallonia, Belgium

E&E-B03	Mus Jorben	Randles circuit and performance analysis of a small proton exchange membrane fuel cell using current interrupt and electrochemical impedance spectroscopy techniques
E&E-B04	Pashayeva Ziyaret	Dissolution of cellulose in ionic liquids based on acetic acid
E&E-B05	Santos Sara	Solid micellar catalysts for CO ₂ hydrogenation to formate
E&E-B06	Stulens Sander	Synthesis of hollow mesoporous MO _x spheres for enhanced confinement of polysulphides in lithium Sulfur batteries
E&E-B07	Vandeputte Delphine	Use of Cl/Br ratio as tracer for anthropogenic contamination in groundwater
E&E-B08	Vanderschaeghe Hannah	Thermo-responsive polymers for water harvesting from air
E&E-B09	Waly Sara	Artificial solar concentrators for renewable energy applications

Chemical Processes & Reactor Technologies (CP&RT)		
CP&RT-B01	Houilleberghs Maarten	Dispersing carbomers, mixing technology matters!
CP&RT-B02	Hu Tianze	Investigation of dynamical aspects of molecular self-assembly and polymorphism on graphene using Raman spectroscopy
CP&RT-B03	Janssens Pieter	Dehydration of biomass-derived butanediols into green 1,3-butadiene: single-event microkinetic model construction and process design
CP&RT-B04	Lappa Foteini	Catalytic materials for CO ₂ conversion to heavier hydrocarbons
CP&RT-B05	Lataf Mohamed Amine	The synthesis and characterization of magnetic microwave absorbers for microwave-assisted pyrolysis
CP&RT-B06	Najafi Lahiji Mahsa	Pulse gas chromatography study of light olefin and paraffin adsorption
CP&RT-B07	Pourfallah Hesam	Computational fluid dynamics assisted reactive distillation design for the energy efficient dehydrogenation of liquid organic hydrogen carriers

CP&RT-B08	Torka Beydokhti Mostafa	Separation of zeolites with electrosedimentation
CP&RT-B09	Vandekerckhove Bavo	Practical actinometry in photoflow reactors
CP&RT-B10	Zanganeh Zinat	CO ₂ hydrogenation to methanol over Au/ZnZrO _x at high reaction temperatures

Renewables & Sustainability (R&S)		
R&S-B01	Meersseman Arango Hippolyte	Membrane-immobilized transaminase for intensified chiral amines production
R&S-B02	Mikolaitiene Austeja	Microalgae in fertilizers as a bioactive material to increase the sustainability of agroeco systems
R&S-B03	Morais Alysson	Multi-diagnostic NMR-dielectric characterization of water confined in hydrophobic pores
R&S-B04	Mortier Jonas	Co(salen)-catalyzed oxidation of para-substituted phenols towards benzoquinones: an experimental study of lignin model substrates
R&S-B05	Nees Marthe	The NCO cycle: heating up to the full recycling of PU waste.